

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* DIRK SELDESLACHTS

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Appeal 2007-0295  
Application 09/051,565  
Technology Center 1700

Decided: March 23, 2007

Before EDWARD C. KIMLIN, THOMAS A. WALTZ, and  
PETER F. KRATZ, *Administrative Patent Judges*.

WALTZ, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal from the Primary Examiner's final rejection of claims 28, 32, 33, 36 through 40, 43 through 48, 50, 53, and 55 through 70, which are the only claims pending in this application (Br. 2; Answer 2).<sup>1</sup> We have jurisdiction pursuant to 35 U.S.C. §§ 6 and 134.

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<sup>1</sup> Appellant states that an amendment dated Oct. 18, 2002, subsequent to the Final Rejection, was not entered as noted in the Advisory Action dated

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According to Appellant, the invention is directed to a device for eliminating unwanted volatile components from a beer wort and to a method of eliminating volatile components using this device (Br. 3). Independent claims 28 and 63 are representative of the invention and a copy of these claims may be found in the Appendix to Appellant's Brief.

In addition to Appellant's admitted prior art (hereafter APA), the Examiner relies on the following references as evidence of obviousness:

Krüger US 4,550,029 Oct. 29, 1985

Robert H. Perry and Don Green, *Perry's Chemical Engineers' Handbook*, 18-19 to 18-37 (6th ed., 1984) (hereinafter Perry).

## ISSUES ON APPEAL

Claims 28, 32, 33, 36-40, 43-48, 50, 53, and 55-70 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Appellant's admissions in view of Krüger and Perry (Answer 3).<sup>2</sup>

Appellant contends that the only admission is that people in the beer industry have tried to eliminate unwanted volatile aromatic components from beer wort (Br. 11).

Nov. 1, 2002 (Br. 2). Appellant further states that a “supplemental amendment” cancelling claim 54 was filed on Dec. 23, 2002, and “should be entered” (Br. 3). The Examiner does not specifically indicate that this amendment was entered but notes that claim 54 has been cancelled (Answer 2, ¶ (8)). Accordingly, for purposes of this appeal, we consider the amendment dated Dec. 23, 2002, as entered and claim 54 cancelled.

<sup>2</sup> The Examiner erroneously includes some cancelled claims in the statement of the rejection (Answer 3). However, we deem this error harmless since Appellant is aware of the claims involved in this rejection (Br. 8-9).

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Appellant contends that Perry is contrary to Krüger since Perry advises the use of packed columns for a low degree of agitation while Krüger desires a high degree of agitation for his plate device (Br. 15).

Appellant further contends that Perry teaches conditions unfavorable to packed columns to include solids present in the liquid, and since beer wort contains solids, Perry must teach away from the claimed invention (Br. 15).

Appellant also contends that Perry agrees with Krüger that plate stripping or distillation apparatus is best suited for the separation of materials with distinctly separated boiling points, such as the stripping of beer wort (Reply Br. 2).

The Examiner contends that Perry teaches all aspects of Appellant's claimed packed column, and teaches the "pros and cons" of packed columns vs. plate columns (Answer 4 and 7).

The Examiner contends that both packed columns and plate columns were well known for separation of unwanted volatile components, and Perry teaches that it would have been obvious to use packed columns in place of the plate columns of Krüger (Answer 4).

Accordingly, the issues in this appeal are as follows: (1) given that it was well known and desirable to remove unwanted volatile components from beer wort, would it have been obvious to use a packed column device for this separation?; and (2) if it would have been obvious to use a packed column separation device to process beer wort, does Perry disclose or

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suggest all the elements of the packed column device as claimed by Appellant?

We determine that there is a prima facie case of obviousness in view of the reference evidence, and Appellant's arguments have not adequately rebutted this prima facie case of obviousness. Therefore we AFFIRM the rejection of claims 28, 32, 33, 36-40, 43-48, 50, 53, and 55-70 under § 103(a) over the APA in view of Krüger and Perry essentially for the reasons stated in the Answer, as well as those reasons set forth below.

#### OPINION

We determine the following factual findings from the record in this appeal:

- (1) Appellant admits that it was known in the art to boil beer wort to eliminate unwanted volatile aromatic components from the wort (Specification 1:17-21; Answer 3);
- (2) Appellant admits that it was known in this art to treat beer wort leaving a reactor with a contraflow of steam in a stripping column, where the stripping column may be a plate type column or a column packed with filler bodies (Specification 2:20 – 3:14);
- (3) Krüger teaches the use of a plate column as the treatment unit for removing volatile components from beer wort by countercurrent contact with inert gas/steam (col. 2, ll. 3-14, 30-32; col. 3, ll. 21-30);

- (4) Perry teaches the advantages and disadvantages of packed columns and plate columns (pp. 18-19 to 18-22);
- (5) Perry teaches that the typical packed column is randomly filled with packing material, operated under counterflow conditions, with a support plate for the packing material, and a liquid-distributing device to provide effective irrigation of the packing (p. 18-19);
- (6) Perry discloses various types of support plates, including ones with corrugations and orifices (pp. 18-25 to 18-27; Figures 18-46 to 18-48) whereby with countercurrent type of support plate the free area for gas flow can range up to 90% of the column cross-sectional area (p. 18-26); and
- (7) Perry discloses various types of liquid distributors, desiring a device that “spreads the liquid uniformly across the top of the packing” (p. 18-27), including an orifice-type distributor with a plurality of orifices (perforations) and chimneys (risers) (p. 18-28; *see* Figure 18-51).

It is axiomatic that admitted prior art in an applicant’s specification may be used in determining the patentability of a claimed invention. *See In re Nomiya*, 509 F.2d 566, 570-71, 184 USPQ 607, 611-12 (CCPA 1975). It is also axiomatic that consideration of the prior art cited by the Examiner may include consideration of the admitted prior art found in an applicant’s specification. *See In re Davis*, 305 F.2d 501, 503, 134 USPQ 256, 258

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(CCPA 1962); *cf.*, *In re Hedges*, 783 F.2d 1038, 1039-40, 228 USPQ 685, 686 (Fed. Cir. 1986). In general, a reference will teach away if it suggests that the line of development flowing from the reference's disclosure is unlikely to be productive of the result sought by the applicant. *See In re Gurley*, 27 F.3d 551, 553, 31 USPQ2d 1130, 1131-32 (Fed. Cir. 1994).

Applying the preceding legal principles to the factual findings in the record of this appeal, we determine that the reference evidence is sufficient to establish a *prima facie* case of obviousness. We determine that Perry does not teach away from the claimed subject matter since this reference merely lists the "pros and cons" of each type of stripping column, i.e., packed columns vs. plate columns, and does not lead away from the result sought by Appellant (*see* factual finding (4) listed above). In other words, Perry teaches some advantages and disadvantages for treating beer wort with a packed column (*id.*). We determine that the admitted prior art teaches the use of packed columns or plate columns in the treatment of beer wort to remove unwanted volatile components, and this finding alone would have suggested use of the packed column designs, such as those taught by Perry (either alone or as a substitute for the plate column of Krüger) (*see* factual finding (2) listed above). We further determine that Perry discloses or suggests every device limitation as required by the claims on appeal (*see* factual findings (5) through (7) listed above). Additionally, the APA and Perry disclose and suggest every method limitation as required by the claims on appeal (*id.*). Regarding the limitations of the dependent claims, we adopt

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the Examiner's factual findings and conclusion of law as stated in the Answer 6-7.

For the foregoing reasons and those stated in the Answer, we determine that a prima facie case of obviousness has been established by the reference evidence. Based on the totality of the record, including due consideration of Appellant's arguments, we determine that the preponderance of the evidence weighs most heavily in favor of obviousness within the meaning of § 103(a). Therefore, we affirm the sole rejection on appeal.

The decision of the Examiner is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv)(2006).

AFFIRMED

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